

# Filippo Mazzoli

---

University of Virginia  
Department of Mathematics  
141 Cabell Drive, Kerchof Hall  
Charlottesville, VA 22904-4137 (USA)

*Email:* [ecu4xw@virginia.edu](mailto:ecu4xw@virginia.edu)  
*Skype:* [filippomazzoli](#)  
*Webpage:* <https://filippomazzoli.github.io>

- Anagraphics**      Born 11/21/1992 in Firenze (Italy), Italian citizen.
- Employment**      **Whyburn Research Associate and Lecturer,**      Aug 2020 – current  
University of Virginia, Department of Mathematics.  
*Mentor:* Sara Maloni.
- Education**      **Ph.D. in Mathematics,**      Oct 2016 – July 2020  
Université du Luxembourg, Mathematics Research Unit.  
*Advisor:* Jean-Marc Schlenker.  
*Thesis:* “Constant curvature surfaces and volumes of convex co-compact hyperbolic manifolds”.
- Master in Mathematics,**      Sept 2014 – Sept 2016  
Università di Pisa, Dipartimento di Matematica.  
*Grade:* 110/110 summa cum laude.
- Bachelor in Mathematics,**      Sept 2011 – Sept 2014  
Università di Pisa, Dipartimento di Matematica.  
*Grade:* 110/110 summa cum laude.
- Research Interests**      Hyperbolic geometry, Kleinian groups, (Higher) Teichmüller Theory, Anti-de Sitter geometry, Low-dimensional topology, quantum Teichmüller space, quantum hyperbolic invariants.
- Publications and Preprints**      F. Mazzoli, G. Viaggi,  $SO_0(2, n + 1)$ -maximal representations and hyperbolic surfaces, preliminary version.  
D. Choudhury, F. Mazzoli, A. Seppi, *Quasi-Fuchsian manifolds close to the Fuchsian locus are foliated by constant mean curvature surfaces*, Preprint arXiv:2204.05736, submitted.  
F. Mazzoli, A. Seppi, A. Tamburelli, *Para-hyperKähler geometry of the deformation space of maximal globally hyperbolic anti-de Sitter three-manifolds*, Preprint arXiv:2107.10363, submitted.  
F. Mazzoli, *The infimum of the dual volume of convex co-compact hyperbolic 3-manifolds*, Preprint arXiv:2101.09380, accepted, to appear in *Geometry & Topology*.  
F. Mazzoli, *Constant Gaussian curvature foliations and Schläfli formulas of hyperbolic 3-manifolds*, Preprint arXiv:1910.06203, submitted.  
F. Mazzoli, *The dual volume of quasi-Fuchsian manifolds and the Weil-Petersson distance*, *Transactions of the American Mathematical Society* 375 (2022), 695–723, Preprint arXiv:1907.04754.  
F. Mazzoli, *The dual Bonahon-Schläfli formula*, *Algebraic & Geometric Topology* 21-1 (2021), 279–315. Preprint arXiv:1808.08936.  
F. Mazzoli, *Intertwining operators of the quantum Teichmüller space*, Preprint arXiv:1610.06056, under revision.

Awards and Grants	<p><b>Excellent Thesis Award, Year 2020,</b> Université du Luxembourg.</p> <p><b>Graduate Internship grant, Year 2020,</b> GEAR Network.</p> <p><b>Travel grant for graduate students, Year 2019,</b> DPMA, Université du Luxembourg.</p> <p><b>Premio di Studio “Benedetto Sciarra” Anni 2015-2016,</b> Scuola Normale Superiore, Pisa.</p>	
Long Research Visits	<p><b>University of Southern California,</b> Supervised by Francis Bonahon.</p>	Jan 2019 – March 2019
Teaching	<p><b>University of Virginia,</b> MATH 8720 Differential Geometry. MATH 5700 Introduction to Geometry. MATH 3310-100 Basic Real Analysis. MATH 3350-001/002 Applied Linear Algebra. MATH 2310-101/201 Calculus III (Teaching assistant).</p> <p><b>Université du Luxembourg,</b> BASI-313 Analyse 1 (Teaching assistant). BASI-280 Analyse 1a &amp; 1b (Teaching assistant). BASI-10 Analyse 2a &amp; 2b (Teaching assistant). BASI-12 Analyse 3b (Teaching assistant).</p>	<p>Spring 2022 Spring 2022 Fall 2021 Spring 2021 Fall 2020</p> <p>Fall 2019 Fall 2018 Spring 2018 Fall 2017</p>
Invited talks	<p><b>Geometry Seminar, University of Virginia.</b> <b>55th Spring Topology and Dynamics Conference,</b> <b>Baylor University.</b> <b>Geometry-Topology Seminar, University of Maryland.</b> <b>Differential Geometry Seminar, Heidelberg University.</b> <b>Nearly Carbon Neutral Geometric Topology Conference,</b> <b>virtual.</b> <b>Geometry Seminar, University of Virginia.</b> <b>Parole aux jeunes géomètres dynamiques, GDR Platon.</b> <b>Pangolin Seminar, virtual.</b> <b>Max Dehn Seminar, University of Utah.</b> <b>Topology Seminar, Texas A&amp;M.</b> <b>Geometry &amp; Topology Seminar, Boston College.</b> <b>Geometry &amp; Topology Seminar, Yale University.</b> <b>Differential Geometry Seminar, Heidelberg University.</b> <b>Séminaire de Théorie Spectrale et Géométrie,</b> <b>Institut Fourier.</b> <b>Combinatorial and algebraic aspects of geometric structures, Chiang Mai University (Lightning talk).</b> <b>Geometry Seminar, University of Virginia.</b> <b>Young Mathematicians Symposium of the Greater Region, INRIA Nancy - Grand Est.</b> <b>Structures on Surfaces, INRIA Nancy - Grand Est.</b></p>	<p>April 4, 2022 Mar 12, 2022 Nov 29, 2021 June 10, 2021 June 2021 May 11, 2021 Dec 8, 2020 Nov 3, 2020 Oct 14, 2020 Febr 12, 2020 Jan 30, 2020 Jan 28, 2020 Jan 23, 2020 Dec 12, 2019 Aug 2019 Febr 2019 Sept 2018 May 2018</p>

Presentations	<b>Reading Seminar, University of Virginia,</b> <i>An introduction to Higgs bundles (with the Geometry group at UVA).</i>	Fall 2021
	<b>Reading Seminar, University of Virginia,</b> <i>Anosov representations (with S. Maloni &amp; A. Traaseth).</i>	Fall 2020–Spring 2021
	<b>Reading Seminar, Université du Luxembourg,</b> <i>A hyper-Kähler extension of the Teichmüller space (with A. Seppi).</i>	Fall 2018
	<b>PhD Seminar, Université du Luxembourg,</b> <i>About the McShane identity.</i>	Apr 2018
	<b>PhD Away Days, Université du Luxembourg,</b> <i>Classical applications of the H-Cobordism theorem.</i>	Sept 2017
	<b>Geometry &amp; Topology Seminar, Université du Luxembourg,</b> <i>Intertwining operators of the quantum Teichmüller space.</i>	Sept 2017
	<b>PhD Seminar, Université du Luxembourg,</b> <i>A parametrization of complex projective structures on surfaces.</i>	Apr 2017
	<b>Seminari dei Baby Geometri, Università di Pisa,</b> <i>Sulle Geometrie in dimensione 3.</i>	Sept 2015
Mentoring	<b>Research Experience for Undergraduates,</b> <b>University of Virginia.</b> Co-advisor: Sara Maloni. Students: K. Betts, T. Larsen, J. Utley, A. Vanis. Project: <i>The tri-pants graph of the twice-punctured torus,</i> Preprint arXiv:2111.07136.	June-July 2021
Organizing	<b>Virginia Topology Conference, University of Virginia,</b> <i>Co-organizers: Thomas Koberda, Sara Maloni, Mark Pengitore.</i>	Nov 2021
Service	Referee for <i>Geometry &amp; Topology, Transactions of the American Mathematical Society.</i>	
Languages and Skills	Italian (native), English (fluent), French (intermediate). C Language, L <sup>A</sup> T <sub>E</sub> X, Matlab.	
References	Research:  Francis Bonahon Department of Mathematics University of Southern California fbonahon@usc.edu +1 (213) 740-2390  Martin Bridgeman Department of Mathematics Boston College bridgem@bc.edu +1 (617) 552-3770  Teaching:  Hugo Parlier Mathematics Research Unit Université du Luxembourg hugo.parlier@uni.lu +352 46 66 44 5648  Francesco Bonsante Dipartimento di Matematica Università degli Studi di Pavia francesco.bonsante@unipv.it +39 0382 985641  Jean-Marc Schlenker Mathematics Research Unit Université du Luxembourg jean-marc.schlenker@uni.lu +352 46 66 44 5438	